

REMARKS/ARGUMENTS

The Examiner's Response to Amendment dated March 1, 2004, setting an extendible one-month period for response is gratefully acknowledged.

The pending claims are 1-17 and 19. Claim 1 is amended herein based upon disclosure, for example, at pages 3-5 of the specification as filed. Claim 2 is cancelled without prejudice or disclaimer. New claim 20 is added based upon previous claims 1, 3, 6, 8 and 9. Care has been taken to ensure that no new matter is added.

Entry of the drawings and claim amendments, and reconsideration in view of the following remarks, is requested.

The issues are addressed in the same order as in the Office Action.

Drawings

The drawings are objected to on the grounds of legibility and as containing instances where different parts are referenced by the same number.

A set of corrected drawings that Applicant asserts addresses the Examiner's objections, and which were prepared by a draftsman, is attached to this paper.

Entry of the drawings and withdrawal of the objections is requested.

Claim Rejections under 35 U.S.C. § 112

(A) Claims 6-9 are rejected under 35 USC §112, first

paragraph, as allegedly not being enabled by the specification. According to the Examiner, the specification, while admittedly enabling controlling the signal level for a given position along a transmission path according to the attenuation between the two endpoints of the transmission path, does not enable controlling the signal level for a position based on the propagation time of the signal along the transmission path, the propagation time being a determined parameter of the path.

Applicants respectfully traverse the rejection.

Applicants assert that they properly act as their own lexicographer, in a manner not repugnant to the art, in using the term "signal level" and "losses in a signal" to encompass not just attenuation, but also other factors leading to communication impairment (p.3, line 22), including the elimination of echoes and feedback (e.g. p.4, lines 20-21), ambient noise (p.4, line 15), and the like. Viewed in this light, "controlling the signal level for a given position (P1 through P4) along the transmission path using the ascertained parameter" includes controlling the signal level so as to cancel time delays (Claim 6), acoustical or electrical echoes (Claim 8), or interference signals (Claim 9). Thus, as taught at p.3, line 32, the term "control of signal level" includes compensation of signal losses due to all of the above causes.

Applicants further assert that one of ordinary skill would have known, at the time of the present invention, how to correct for these losses, once the relevant parameters of the pathways were determined. For example, Applicants assert that one of

ordinary skill would have readily understood that, once a time delay was determined for an acoustic path, applying a suitable delay to the corresponding electrical pathway in order to synchronize the loudspeaker with the acoustical pathway, would have been merely routine and would not have required undue experimentation.

Reconsideration and withdrawal of the rejection are respectfully requested.

(B) Claims 12-17 and 19 are rejected under 35 USC § 112, first paragraph, as allegedly lacking enablement. It appears to be the Examiner's position the specification does not teach the method of detecting a parameter of an associated transmission function of a transmission path, and therefore that undue experimentation would be required to practice the claimed invention.

Applicants respectfully traverse the rejection.

The Examiner's attention is respectfully drawn to the controller (14) as broadly defined in the specification as capable of providing for the detection of the parameters associated with the path (see Fig. 3 and page 12, lines 25 to page 13, line 7) through processing of the inputs from each microphone (E_1 - E_n). Applicants assert that methods for detecting the required parameters from such inputs were well-known in the art at the time of the present invention. Applicants agree with the Examiner's statement at page 4, lines 2-4, of the Office Action, the "[o]ne of ordinary skill in the audio arts would

attest the act of 'detecting' as using various transducers to determine a transfer function of a sound space." Applicants assert that one of ordinary skill would readily recognize that controller (40) would perform such a role and that therefore undue experimentation would not be required to implement the invention as claimed. Applicants stand ready to provide prior art references to the Examiner in support of this view, should the Examiner deem it necessary.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claim Rejections under 35 U.S.C. § 102

A. Claims 1-5 are rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Roddy (U.S. Patent No. 6,363,156).

Applicants respectfully traverse the rejection.

With respect to claim 1 (as amended herein), the present invention provides a process for the compensation of losses (defined broadly) in an acoustic signal in a room. The method comprises determining a parameter of the acoustic path between the sending point (6) of the first position and the receiving point (4) of the second position that is capable of being used to compensate losses due to echoes, feedback or ambient noise, and generating a compensating acoustic signal via the second electro-acoustic means (L1, L2, L3, L4) using the parameter, whereby the losses in the acoustic signal are compensated.

In contrast, although Roddy may teach some of the same equipment used in the embodiments of the present invention, the method of their use is quite different. In particular, the gain of amplifier 42 of Roddy is either fixed, or adjusted according to the purely subjective evaluation of a passenger. Roddy does not teach a parameter of an associated transmission path that is determined or that is then used to compensate for signal losses. Thus, Roddy does not teach or suggest all of the elements of the rejected claims. In particular, Roddy fails to teach or suggest the ascertaining of at least one parameter of an associated transmission path, and therefore it follows that Roddy must also fail to teach controlling the signal level using such a parameter.

Because Roddy does not teach or suggest all of the elements of the rejected claims, as required to sustain a rejection for anticipation, Applicants respectfully request that the rejection be withdrawn.

B. Claims 1, 10 and 11 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Craven et al. (U.S. Patent No. 5,815,580).

Applicants assert that the rejection is rendered moot by the amendments to claim 1 herein, which are made to better define that which Applicants regard as their invention.

Craven teaches a compensating filter for a room in which the transfer function is derived by sending a test signal from a loudspeaker to a microphone.

In contrast, the present invention is considerably more complex in that it comprises compensating for signal losses between multiple positions in a room in which each position comprises a sending position and a receiving position. By electro-acoustic means at both the sending and receiving points, the signal is sent from a sending position to a receiving position via both acoustic and electrical pathways. In this respect, the invention differs decisively from that of Craven. In the present invention, a compensating acoustic signal is generated, based on a determined parameter of the acoustic pathway, and is delivered via an electrical path to a second electro-acoustic means at the receiving point. Craven fails to teach or suggest this feature of claim 1 as amended.

Because Craven does not teach or suggest all of the elements of the rejected claims, as required to sustain a rejection for anticipation, Applicants respectfully request that the rejection be withdrawn.

Claim Rejections under 35 U.S.C. § 103

Claims 12-17 and 19 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable for obviousness over Roddy (above) in view of Ericksson et al. (U.S. 5,602,928).

Applicants respectfully traverse the rejection on the grounds that Ericksson fails to remedy the deficiency in Roddy

U.S. PATENT APPLICATION
SERIAL NO.: 09/638,499
AMENDMENT AND RESPONSE

ATTY DOCK: 3926.013

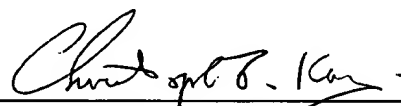
noted above. In particular, Roddy fails to teach or suggest the ascertaining of at least one parameter of an associated transmission path, and therefore it follows that Roddy must also fail to teach controlling the signal level using such a parameter. Ericsson, which teaches noise canceling adaptive filters in the context of a multi-channel communication system, fails to remedy the deficiency of Roddy.

Applicants therefore assert that a *prima facie* case of obviousness has not been made out because the combined references fail to teach or suggest all of the elements of the rejected claims, as required.

Reconsideration and withdrawal of the rejection is therefore respectfully requested.

As there are no further rejections or objections, it is requested that the present application be allowed to pass to issuance.

Respectfully submitted,



Christopher J. Kay
Registration No. 44,820

PENDORF & CUTLIFF
5111 Memorial Highway
Tampa, Florida 33634-7356
(813)886-6085

Dated: **June 1, 2004**